

Application no: 10/804,580

Amendment dated: October 14, 2008

Reply to office action dated: April 14, 2008

## **REMARKS**

Claims 1-5 and 7-21 are pending in the application. By this paper, claims 1-3, 9, 12, 15 and 18 have been amended and claim 6 has been cancelled. Reconsideration and allowance of claims 1-5 and 7-21 are respectfully requested.

### **Rejection under 35 U.S.C. § 112**

Claim 9 has been amended to correct the deficiencies noted in the office action. The dependency of claim 9 has been corrected to claim 8 and the stray text after the period (.) at the end of claim 9 has been deleted. Withdrawal of the rejection of claim 9 under 35 U.S.C. § 112 is respectfully requested.

### **Prior Art Rejection**

Claims 1, 12, 14-16 and 18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by US patent number 6,125,356 to Brockman, et al. (“Brockman”). Claims 2-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brockman in view of US patent number 4,973,952 to Malec, et al. (“Malec”). Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Brockman and Malec and further in view of US patent publication number 2002/0006126 A1 to Johnson, et al. (“Johnson”). Claims 6, 17, 19 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brockman in view of Johnson. Claims 7 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brockman in view of Johnson and further in view of Malec. Claims 8-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brockman in view of Johnson and Malec and further in view of US patent number 5,553,312 to Gattey, et al. (“Gattey”). Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Brockman in view of Gattey. Reconsideration of the rejection of claims 1-21 is respectfully requested.

### **The Present Invention**

The present invention relates generally to an apparatus and method for providing to a sales agent information and training needed to perform a sales transaction. The sales agent is faced with the widest variety of inquiries from a customer. The inquiries can relate generally to the nature of a product or to precise details and brand information. In environments where a wide variety of products are offered and where product features are rapidly changing, and where customer sophistication is unpredictable, the sales agent faces tremendous challenges. The sales agent needs access to up to date information, based on a specific customer's particular needs, and needs this information substantially immediately, during the sales transaction. At the same time, training the sales agent can be costly and time consuming. Similar problems exist in other knowledge-transfer environments.

The present invention provides a clever solution to these problems. The disclosed embodiments continuously and proactively monitor the **context** of the interactions between the sales agent and the customer, including the physical location of the interaction, topics, brands, product names and customer sophistication or awareness. The system and method then use this context information to automatically extract and display the matched product information that helps the customer make a right buying decision. In so doing, it saves both the sales agent and customer time and effort, and helps improve the overall shopping experience. (para. [0010]).

In one exemplary embodiment, a server system selects and serves content based on the context of the interaction between the sales agent and the customer. The context of the interaction typically includes several independent and dependent contexts. In the exemplary embodiment system installed in a home appliance and electronics store, one context is the general product area about which the customer inquires, home appliances such as refrigerators, washers and dryers, and home electronics such as televisions and computer equipment. Further, within the context of computer equipment for example, additional dependent contexts may be identified, such as wireless local area network equipment, laptop computers and routers. Thus, the speech information detected from the interaction and keywords detected in the parties' speech provide contextual information for the system. The conversation between the parties may be monitored so that keywords may be detected, and the keywords then used to retrieve

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information for presentation to the customer by the sales agent. Further, the geographic location of the interaction provides additional contextual information.

When contextual information is available, the information provided in real time to the portable computer for use by the sales agent can be tailored based on a plurality of contexts. This speeds the retrieval process and focuses the information on responding to the true need of the customer (para. [0053] – [0054]).

Moreover, the system and method continuously monitor the context as it changes. As additional contextual information becomes available, from any source, the system and method update the information being provided to the sales agent for presentation to the customer (para. [0097], [00105] – [00106]). Further, this operation is automatic, and does not require action or interaction by the sales agent. The sales agent does not need to enter data to cause the system or method to determine or update context information. Claims 1, 12, 15 and 18 have been amended to emphasize these features.

A significant benefit of these features is that the system provides **non-obtrusive** operation. The system may listen in the background of the conversation between the sales agent and the customer and quietly await the right triggers that link the current context to the right content. This means that, in the exemplary embodiment, the sales agent does not need to explicitly tell the system what to do (as viewed by the customer). In one embodiment, the sales agent paraphrases the customer's question so that the headset microphone can pick up the right keyword context. In another embodiment, the microphone of the portable computer can detect all conversational keywords from both parties (para. [00110]).

**The cited prior art fails to show context determination and providing relevant information to the sales agent as recited in claim 1.**

Claim 1 has been amended to more distinctly define the invention defined by this claim. Claim 1 has been amended by adding features of claim 6 and additional unique features. More specifically, claim 1 has been amended to emphasize several features missing from Brockman and Johnson and the other cited references.

First, claim 1 has been amended to clarify that the method includes *monitoring an interaction* between a sales agent and a customer including *non-obtrusively detecting spoken*

*words* of at least one of the sales agent and the customer. The Office Action relies on Brockman in combination with Johnson as showing this feature. Brockman discloses a system for gathering information about an automobile sales prospect, including the prospect's name, address, family, interests, etc. (FIGS. 3-7). A goal for Brockman is to put a device in the seller's hand to allow him to gather "sufficiently complete data on sales prospects," column 2, lines 20-27. "The handheld unit 110 has a conventional input device operable by the seller for recording data about the prospect, along with suitable conventional programming for managing the input process." See column 8, lines 22-42. Brockman states that the input device may include "a voice-recognition unit," and "may have an audio recording input capability." Column 5, line 64 – column 6, line 5. However, this is a mere suggestion of recognition of a voice, as in voice detection. For example, if the device recognizes presence of a voice, it operates to record the voice; if not, it remains idle.

Johnson does not relate to providing information in a sales-support context, but discloses a system by which a subscriber contacts the system with audible requests for information. The subscriber dials in to the system and the spoken request is recognized by a communication node 212 (para. [0036] – [0040]. A voice recognition (VRU) server converts the received speech to data, para. [0052]. An application server provides content and other retrieved information to the user through the VRU server or send tasks or requests received from the subscriber to other destinations, para. [0064]). Johnson shows use of the subscriber's voice to log in and request data, much like using an internet account for online access to world wide web information and browsing.

There is no suggestion to combine Brockman and Johnson. While Brockman allows that the seller's input device includes a voice-recognition unit, Brockman makes no further mention of such a device or how it might be used. Since it is described in connection with voice recording capability in a device that has as a key purpose the recording contact information, it appears Brockman only intended the voice-recognition unit to facilitate that process. Certainly, Brockman makes no mention of using the voice-recognition unit to access data outside the handheld unit of the seller.

In fact, Brockman teaches away from extending the disclosed idea to a voice based system such as Johnson. All of Brockman's FIGS. 3-21 disclose a textual data entry and

compilation, with no further suggestion, beyond the reference to the voice-recognition unit, of detection of spoken words of either the seller or customer or both.

Moreover, as noted above and recited in claim 1, this detection is **non-obtrusive**, meaning it occurs without the awareness or interruption of the sales agent and the customer. There is no interruption of the smooth flow of conversation between the two parties. In contrast, Brockman requires manual data entry as illustrated in the figures. This is completely disruptive of the conversation. Plus, information required by Brockman's system, such as the prospect's name, address, spouse and children's names, hobbies interests, etc. (see, e.g., FIGS. 3, 4 and 5) makes clear that Brockman has no interest in a non-obtrusive detection of the conversation between the parties. Brockman instead wants to gather specific information and requires that that information be obtained.

Accordingly, no person having ordinary skill in the art would rely on Johnson to extend the teaching of Brockman. The two do not cooperate in the manner proposed by the Office Action.

Further, claim 1 has been amended to recite "automatically determining one or more contexts of the interaction including detecting context-identifying keywords among the spoken words to identify a current context and linking the current context to stored information relevant to the interaction" (*emphasis added*). Brockman and Johnson fail to disclose this feature. Johnson does disclose recognition of speech and conversion of the speech to data and a parser unit 302 which "parses the information according to the syntax rules of the markup language." However, there is no suggestion in Johnson of detecting context-identifying keywords among spoken words to identify a current context. The parser of Johnson merely constructs a markup language document from the received speech. The prior art of record fails to include this context determining feature of the invention of claim 1.

Claim 1 has been further amended to recite "further monitoring the interaction and automatically determining one or more additional contexts of the interaction." That is, **the context of the interaction is updated** as it progresses. This is an important feature because, if the system and method are successful, the interaction will proceed toward a sale. The initially uncertain customer will be educated by the sales agent as the sales agent better learns the desires and requirements of the customer. The information required and the information provided will

converge toward a final point. With each exchange, the context of the interaction will change. For example, the initial context may be defined by geographic information—what area of a store the sales agent is located in. The updated context may be provided by recognizing the customer's spoken interest in a particular product type. Further updated context may be provided by identification of a particular brand. The claimed invention of claim 1 automatically identifies the updated context and automatically retrieves additional relevant information based on each updated context.

Brockman's device fails to show such a feature. Brockman merely shows that the system may prompt the seller to ask additional scripted questions of the prospect, based on the prospect's answers to the seller's questions. Column 10, lines 3-12. However, this is not automatic determination of a context and automatic retrieval of additional stored information relevant to the interaction for the sales agent to share with the customer, as recited in claim 1.

According, it is respectfully submitted that claim 1 defines features missing from Brockman and Johnson, taken alone or together. Further, the ordinarily skilled artisan would not be prompted to combine the two references in the way suggested by the Office Action. Withdrawal of the rejection of claim 1 is respectfully requested. Claims 2-5 are dependent from claim 1 and are submitted to be allowable for the same reasons.

**The cited references fail to disclose all limitations of claim 7**

Claim 7 relates to a real-time sales support method in which speech is detected and decoded and context keywords detected. Detection of the context keywords then causes a memory to be accessed and data to be retrieved. Data is then transmitted to a display device to produce an audio or video presentation. Many features of claim 7 are missing from the cited references.

First, the Office Action relies on Brockman and Johnson as disclosing detecting signals representative of speech and decoding the speech to detect context keywords. However, neither Brockman nor Johnson discloses decoding speech to detect **context keywords**. Johnson discloses receiving speech during a call from a subscriber and parsing the speech. However, no attempt is made by Johnson to identify keywords, or keywords related to or identifying the context of a conversation as those terms are used in the present application. Rather, the parser

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processes speech according to syntax rules and generates a tree or hierarchical structure (para. [0072]). There is no suggestion of detecting context keywords.

Further, claim 7 recites “in response to detection of a context keyword, accessing a memory to retrieve information....” The Office Action notes that Brockman discloses that a handheld unit may interrogate a data store for information requested by a seller (column 6, lines 12-16). However, Brockman fails to disclose that the “interrogation” is in response to detection of a context keyword as required by claim 7. The cause and response nature of the operation of the claimed invention is an important part of the “automatic” and “unobtrusive” operation described above. This is a substantial enhancement over a system like Brockman where the system only obtains “information requested by the seller.”

Accordingly, it is respectfully submitted that the invention of claim 7 is nowhere shown, described or suggested among the prior art of record. Withdrawal of the rejection of claim 7 is respectfully requested. Claims 8-11 are dependent from claim 7 and are submitted to be allowable for the same reasons.

### **The cited references fail to disclose all limitations of claim 12**

Claim 12 has been amended to further distinguish the invention defined by this claim over the cited references. Claim 12, as amended, recites a real-time sales support tool which includes programming code to continuously detect subsequent context identifying keywords to identify an updated context of the conversation and to retrieve updated information based on the subsequent context identifying keywords. Other programming code produces an updated presentation of the retrieved information.

As noted above, Brockman fails to include the feature of updating context of a conversation or interaction as the interaction occurs. If the sales agent and the customer move to a new department of the store, this context change can be detected, in one example, and updated information based on subsequently detected context identifying keywords. Brockman lacks this ability.

Further, Brockman lacks the ability to automatically detect context identifying keywords. Brockman discloses that “different scripts may be used for different contexts,” (column 6, line 51) but to the extent this is true, the process must be performed manually by a seller. Brockman

fails to show automatic operation, and fails to show detection of keywords which identify the context.

Still further, claim 12 has been amended to specify an audio input device that non-obtrusively detects conversation between a sales agent and a customer. As noted above, Brockman's device is quite *intrusive*, apparently intentionally so as to ensure that all contact information for a prospect is captured while the prospect is available. The seller and/or the prospect apparently manually enter all information, including very personal information about the prospect such as children's names and interests. Brockman indicates that a voice-recognition unit may be included but makes no further disclosure or allusion to this device. This merely suggests that the voices in the conversation may be recognized and recorded and played back later for a purpose such as training or use of the prospect's information.

Still further, claim 12 recites that a data processing system, not the audio input device, automatically detects the context identifying keywords. Brockman's disclosure describes a voice-recognition unit *at the handheld unit*. Even if Brockman can be read as disclosing detection of context identifying keywords at the handheld unit (and such an interpretation is submitted to be unreasonable), Brockman fails to disclose the claimed feature of automatic detection *at a separate data processing system* and thus fails to show all elements of claim 12.

Accordingly, it is respectfully submitted that the invention of claim 12 is nowhere shown, described or suggested among the prior art of record. Withdrawal of the rejection of claim 12 is respectfully requested. Claims 13 and 14 are dependent from claim 12 and are submitted to be allowable for the same reasons.

#### **The cited references fail to disclose all limitations of claim 15**

Claim 15 has been amended to further distinguish the invention defined by this claim over the cited references. Claim 15, as amended, recites a just in time learning tool which includes an input/output device to non-obtrusively monitor a conversation to generate signals about the conversation, a speech server which continuously receives the signals and automatically identifies conversational cues and continuously identifies and updates current informational need of a party to the conversation, and a data store which stores information of potential interest which can be retrieved upon identification of the identified conversational cues.

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Brockman fails to disclose a system or method which can continuously receive signals about a conversation and continuously identify and update a current informational need of a party to the conversation. Brockman does disclose scripts that can be used for different sales contexts, but there is no suggestion in Brockman that these scripts can be modified or updated based on an updated information need of the party.

Further, Brockman fails to show automatically identifying specified conversational cues among the spoken words of the conversation. While Brockman suggests inclusion of a voice-recognition unit, there is no disclosure or even suggestion as to how this unit might be used to operate automatically. Rather, Brockman teaches at great length use of a keyboard and display for entering information.

Claim 15 also recites that an input/output device non-obtrusively monitors a conversation. Brockman fails to include this feature, but merely teaches a voice-recognition unit, without providing any further disclosure. The mere naming of such a device without more, or without even showing the device in a drawing or describing any function, cannot be said to anticipate the claimed input/output device.

Still further, claim 15 recites that the speech server, not the input/output device, automatically identifies specified conversational cues among the spoken words of the conversation. Brockman's disclosure instead describes a voice-recognition unit *at the handheld unit*. Thus, Brockman fails to disclose the claimed feature of automatic identification at a separate speech server and thus fails to show all elements of claim 15.

Accordingly, it is respectfully submitted that the invention of claim 15 is nowhere shown, described or suggested among the prior art of record. Withdrawal of the rejection of claim 15 is respectfully requested. Claims 16 and 17 are dependent from claim 15 and are submitted to be allowable for the same reasons.

#### **The cited references fail to disclose all limitations of claim 18**

Claim 18 has been amended to further distinguish the invention defined by this claim over the cited references. Claim 18, as amended, recites receiving information about a conversation between a sales agent and customer automatically identifying a plurality of contexts of the conversation and automatically identifying relevant information based on the contexts.

The information is displayed for use by the sales agent and the customer. As amended, claim 18 recites repeating this action during the interaction so that the context and identified information can be updated.

As noted above, Brockman fails to disclose this feature. Brockman merely shows that the system may prompt the seller to ask additional scripted questions of the prospect, based on the prospect's answers to the seller's questions. Column 10, lines 3-12. As noted above, this is an important feature in collaboration between a sales agent and a customer. With each exchange between the two, the context of the interaction will change. The invention of claim 18 automatically retrieves additional relevant information based on each updated context.

Further, claim 18 recites "automatically identifying a plurality of contexts of the conversation," (*emphasis added*). Brockman discloses that different scripts may be used for different contexts, column 6, line 51, but provides no suggestion or teaching that those contexts may be automatically identified. Further, Brockman fails to show identification of context based on information received about the conversation. Brockman does not disclose how any script is chosen but definitely does not disclose identification a context or a script based on information received about a conversation between a seller and a customer.

Accordingly, it is respectfully submitted that the invention of claim 18 is nowhere shown, described or suggested among the prior art of record. Withdrawal of the rejection of claim 18 is respectfully requested. Claims 19, 20 and 21 are dependent from claim 18 and are submitted to be allowable for the same reasons.

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With this response, the application is believed to be in condition for allowance. Should the examiner deem a telephone conference to be of assistance in advancing the application to allowance, the examiner is invited to call the undersigned attorney at the telephone number below.

Respectfully submitted,

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